

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-011417**Date Inspected:** 10-Jan-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segment**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, M. Manikandan was present during the time noted above for observations relative to the work being performed.

OBG # TRIAL ASSEMBLY YARD (5AW-5BW)

During the Quality Assurance (QA) random in-process visual inspection of I-Rib stiffener in the OBG Trial Assembly area, this QA inspector discovered the following issue:

- One I-Rib weld between the 5AW to 5BW (Edge panel-I-Rib stiffener) was misaligned across the weld joint.
- The Edge Panel (EP) I-Rib stiffener weld joint is identified as: EP043-001-015 (Cross beam side)
- This weld is complete joint penetration (CJP) butt weld.
- The material is designated as non Seismic Performance Critical Members (Non SPCM).
- The out of flatness measurement across the weld joint is 6mm over a length of 600mm, where the 600mm ruler is centered over the weld joint. The maximum allowable deviation per the Standard Specifications is 5mm.
- Per AASHTO Bridge Construction Specifications, the straightness of longitudinal stiffeners issue was observed. A maximum deviation of 8mm was measured over a length of 2500mm by placing a fully tensioned string line adjacent to both ends of the stiffener where the diaphragm/floor beam intercepted the stiffener. The maximum allowable deviation for straightness is $L/480$ ($2500/480$) = 5.2mm

OBG # TRIAL ASSEMBLY YARD (5AW-5BW)

This QA inspector witnessed final tension verification for lower chevron and upper chevron of Segment 5AW and

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5BW. Witnessed 10% on a random basis the bolts and found the tension to be in general compliance. The panel point and bolt size designations are as follows:

M22 X 70 – DHGM 220004 – 453 NM – PP38(S), PP39(S&N), PP40(S&N), PP42 (N&S), PP43 (N&S)

M22 X 75 – DHGM 220005 – 473 NM – PP38(S), PP40 (N), PP43(S)

M22 X 80 – DHGM 220050 – 486 NM - PP38(S), PP39(S&N), PP40(S&N), PP42 (N&S), PP43 (N&S)

This QA Inspector randomly observed the following work in progress:

OBG # TRIAL ASSEMBLY YARD (6BW-6CW)

FCAW Process:

Welding of weld joint – 020 located on PCMK BP087-001, T-Rib web weld joining 6BW and 6CW. Welder is identified as 053609. ZPMC CWI is identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233-B-U2-F.

FCAW Process:

Welding of weld joint – 030 located on PCMK BP033-001, T-Rib web weld joining 6BW and 6CW. Welder is identified as 053609. ZPMC CWI is identified as Li Yang. The welding variables recorded by QC appeared to comply with the WPS-B-T-2233-B-U2-F.

OBG # TRIAL ASSEMBLY YARD (5AW-5BW)

SMAW Process:

Welding of weld joint - 007 located on PCMK SEG021A, longitudinal weld joining bottom panel and side panel at work point W4. Welder is identified as 066261. ZPMC CWI is identified as Li Yang. Welding was been performed against critical welding repair report B-CWR1046 Rev. 0. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F)-FCM-Repair-1.

SMAW Process:

Welding of weld joint - 021 located on PCMK SEG023A, longitudinal weld joining bottom panel and side panel at work point W4. Welder is identified as 037743. ZPMC CWI is identified as Li Yang. Welding was been performed against critical welding repair report B-CWR1046 Rev. 0. The welding variables recorded by QC appeared to comply with the WPS-345-SMAW-4G (4F)-FCM-Repair-1.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

The incident report is issued for the above mentioned discrepancy observed in 5AW-5BW. And prior to issue it was informed to ZPMC QC and ABF QA.

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Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact , who represents the Office of Structural Materials for your project.

Inspected By:	Manikandan,Murugan
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Quality Assurance Inspector

Reviewed By:	Miller,Mark
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QA Reviewer
